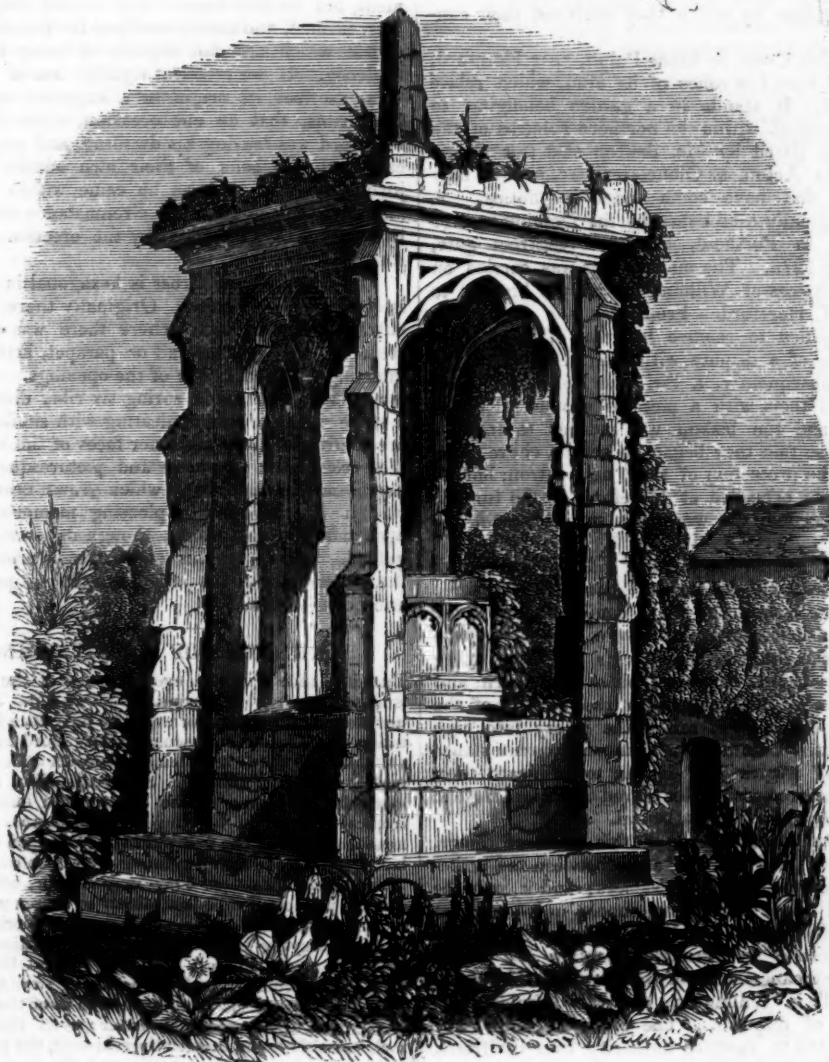




PREACHING CROSSES.



THE BLACKFRIARS' PULPIT, NEAR HEREFORD.

THIS interesting relic of ancient art carries us back to a remarkable era in the history of the Roman Catholic Church. Stone pulpits, either standing alone, or in connexion with cloisters, (under the shelter of which the assembled hearers could listen to the preaching of the Friar who was addressing them) are connected with the history of the different orders of mendicant or begging friars. These men rose up to supply the deficiency occasioned by a gross neglect of duty on the part of the secular clergy. Long before the thirteenth century the monastic orders had degenerated from their primitive austerity, and were totally given up to luxury and indolence, dissipation and licentiousness, so that they were at length neither willing nor able to instruct the people in any adequate manner, while their evil

VOL. XXII.

example was productive of the most injurious effects. In this state of things new orders of men arose, who were destitute of fixed possessions, severe in their manners, and very active in the duties of preaching and prayer. These were the four orders of Mendicant Friars commonly denominated the Franciscans, the Dominicans, the Carmelites, and the Augustines. Speaking of these Friars, Warton, in his *History of English Poetry*, remarks,—

These societies soon surpassed all the rest, not only in the purity of their lives, but in the number of their privileges, and the multitude of their members. Not to mention the success which attends all novelties, their reputation rose quickly to an amazing height. The popes, among other immunities, allowed them the liberty of travelling.

wherever they pleased, of conversing with people of all ranks, of instructing the youth and the people in general, and of hearing confessions without reserve or restriction; and as on these occasions, which gave them opportunities of appearing in public and conspicuous situations, they exhibited more striking marks of gravity and sanctity than were observable in the conduct and deportment of the members of other monasteries, they were regarded with the highest esteem and veneration throughout all the countries of Europe.

Such were the Friars Preachers at the commencement of their career; but we find that in the end they also abused their privileges, and became notorious for the frauds and artifices by which they enriched their convents.

The Preaching Cross, or Stone Pulpit, near Hereford, is one of the very few relics of its kind, which relate to this period. It stands in a garden belonging to Coningsby Hospital, within the northern suburbs of the city; and it is stated by Mr. Britton that this Cross, and one at Iron Acton, in Gloucestershire, are the only stone pulpits that have come under his notice. A priory was originally established by the Dominicans, or Black Friars, in Portfield, beyond Bye-Street gate, about the year 1276. The undertaking was carried on beneath the auspices of William Cantalupe, brother to the Bishop of Hereford. From this site they were, however, compelled to remove by order of the bishop, in consequence of a dispute with the members of the cathedral. Subsequently, a Sir John Daniel, or Deinville, presented them with a piece of ground in Wide-Marsh field, and the bishop was induced to annex a second piece, so that they began to build a church and priory under the protection of their new patron; but he being afterwards beheaded at Hereford, in the time of Edward the Second, the work was suspended till the next reign.

It was completed in the reign of Edward the Third; and that monarch with his son, the Black Prince, three archbishops, one bishop, the king's confessor, and many other distinguished personages, were present at the dedication of the church. The king's confessor dying in Hereford, was interred in the choir of the church; and this circumstance, combining with the novelty of the new religious order, soon raised the priory into high repute, so that it became a not unusual circumstance for persons of wealth and dignity to bequeath their bodies to be interred within this sacred inclosure, instead of within the neighbouring cathedral.

As a natural consequence of this state of things, mutual jealousies and disputes arose between the cathedral clergy and the Friars Preachers; and it may be remarked that these friars were almost universally at variance with the regular monks, and the secular clergy. In 1343 a license was granted enabling the Friars Preachers to exchange some of their lands in Hereford, for other lands in Willington; and this privilege was the occasion of disputes. The bishop's commissary having attempted to exercise authority over the friars, Richard Barrets, their prior, instituted a suit before the Archbishop of Canterbury against the bishop and his commissary. The prior died before it was decided; but his successor prosecuted the suit, and obtained a decree, dated July 6th, 1351, in which it was stated that the order of Friars Preachers, by indulgences and privileges granted from the see apostolic, were exempted from the jurisdiction of any ordinary, and especially from that of the Bishop of Hereford for the time being, or any of his ministers or commissaries, unless the said bishop or his commissary were commissioned thereunto from the see apostolic.

It appears to have been a favourite practice of these friars to preach to large assemblies of people from crosses of the kind above represented, and by the zeal thus evinced they gained a large portion of that popularity with which they were generally received. The present

cross at Hereford was probably attached to the cloisters of the priory; though it now forms, with a few fragments of walls, the only architectural remains of the monastic buildings of which it constituted a part.

Yet when we consider its exposure during so long a period to the vicissitudes of the weather, and to the same evils which many ancient buildings have suffered from in a marked degree, we may congratulate ourselves that so interesting a relic is still in existence, and has not suffered irretrievably from time, or from wanton spoliation. The evidence relating to its origin and use is too plain and well authenticated to need any comment; but we may remark that several conjectures have been formed, and causes ascribed for the erection of the edifice which are not capable of being borne out by evidence. If we recollect rightly, one of these conjectures ascribes its origin to a supposed miracle. The fable runs, that on one occasion, when the Bishop of Hereford was leaving his dwelling, and approaching his cathedral, the bells of their own accord struck up a joyous peal as soon as he came within sight of the church. This miraculous circumstance was celebrated by the prelate, (it is said) by the erection of the stone cross.

The Black Friars' Cross is hexagonal in its form, and is elevated on six steps. Originally there was an open entrance, on one side, where there was an additional step. A sort of hand-rail or parapet, little more than knee-high, closed in five of the openings. In the centre is a pillar, from which spring six ribs, diverging under a stone roof, and communicating with similar ribs, which are continued down the inner faces of the six buttresses. The cross has a venerable and picturesque appearance, heightened by the foliage which grows near and around it. It is altogether a pleasing memorial of former ages and of a zeal which, though in some respects misguided, had at least this merit, that it protested against the grosser evils of the period, and led to a partial reformation of manners.

THE USES OF MINUTE THINGS.

THE influence of plants, even of those of the lowest grade, is much greater than what would at first appear to an unreflecting observer; for even the jelly-like forms of vegetation seen floating on stagnant water afford nourishment to animalcules, which are themselves to serve as food to more highly-developed animals. Sea-weeds afford sustenance to many fish, and even to the dugong and lamantine of the tropical seas, as to the huge hippopotamus. Lichens and mosses are among the first plants to grow upon newly-formed lands, and may be seen vegetating even upon the barren rock. These, insignificant as they may appear, afford by their decay a portion of organized matter to barren soil, and allow of the vegetation of grasses and other small herbaceous plants which, decaying in their turn, give additional organized matter to enrich the soil, and thus prevent that which has been long in cultivation from becoming sterile.

Myriads also of the minutest as well as of the largest living beings feed upon vegetable matter; even the insignificant rock-moss serves as food for the rein-deer, the pasture-grasses for herds of ruminating cattle, and the leaves of trees for the largest quadrupeds now seen upon the surface of the earth. From the great similarity in nature of the different pasture-grasses in every part of the world, man has been able to transport cattle into various countries of the earth which he has chosen to colonize. Some fruits afford nutriment to birds and small quadrupeds; while others, employed as such by man, form, with vegetables, the chief objects of attention to the gardener, and the principles of their culture the science of horticulture; while the cereal grasses, as yielding the greater portion of the food of man, form the principal objects of agriculture.—DR. ROYLE.

ALL war is to be carried on, partly by our own strength, and partly by that of allies and auxiliaries: so in our Christian warfare against the temptations of the world, the things which properly answer these two, are watchfulness and prayer; by watchfulness, we exert and employ our strength; and by prayer we engage God's.—DEAN SOUTH.

EASY LESSONS ON REASONING.

LESSON VII.

§ 1. We have seen that all sound Reasoning consists in referring that of which we would (in the conclusion) affirm or deny something, to a *Class*, of which that affirmation or denial may be made. Now "the referring of anything to a Class," means (as you will perceive on looking back to the examples that have been given) to affirm of it a *Term denoting a Class*; which Term, you will have observed, is the Middle-term of the Syllogism.

We are next led therefore to inquire what terms may be affirmatively predicated of what others.

It is plain that a *proper-name*, or any other term that stands for a *single individual*, cannot be affirmed of anything except that very individual. For instance "Romulus"—the "Thames"—"England"—"the founder of Rome"—"this river," &c., denoting, each, a *single object*, are thence called "*Singular-terms*:" and each of them can be affirmed of that single object only, and may, of course, be denied of any thing else.

When we say "Romulus was the founder of Rome," we mean that the two terms stand for the same individual. And such is our meaning also when we affirm that "this river is the Thames."

On the other hand those terms which are called "*Common*" (as opposed to "*Singular*") from their standing for any, or for every, individual of a Class,—such as "man," "river," "country"—may of course be affirmed of whatever belongs to that Class: as "the Thames is a river;" "the Rhine and the Ganges are rivers."

§ 2. A *Common-term* is thence called (in relation to the "*Subjects*" to which it is applicable) a "*Predicable*;" that is, *affirmatively-predicable*; from its capability of being affirmed of another Term.

A *Singular-term* on the contrary, may be the *Subject* of a proposition, but not the *Predicate*: unless of a *Negative-proposition*; (as "the first-born of Isaac was not Jacob") or unless the Subject and Predicate be merely two expressions for the same individual; as in some of the examples above.

You are to remember however that a *Common-term* must be one that can be affirmed of several other terms, in the same sense, as applied to each of them; as "vegetable," to "grass," and to an "oak." For, different as these are, they are both "*vegetables*" in the same sense: that is, the word "vegetable" denotes the same thing in respect of both of them: [or, "denotes something common to the two."]

But there are several proper-names which are borne, each, by many individuals; such as "John" "William" &c., and which are said to be (in ordinary discourse) very common names; that is, very frequent. But none of these is what we mean by a "*Common-term*;" because, tho' applied to several persons, it is not in the same sense, but always, as denoting in each case, *one distinct individual*.

If I say "King Henry was the conqueror at Agincourt" and, "the conqueror of Richard the Third was King Henry," it is not, in sense, *one* term, that occurs in both those propositions. But if I say of each of these two individuals that he was a "King," the term "King" is applied to each of them in the same sense.

§ 3. A *Common-term*, such as "King" is said to have several "*Significates*;" that is, things to which it may be applied: but if it be applied to every one of these in the same sense, [or denotes in each of them, the same thing] it has but *one* "*signification*." And a *Common-term* thus applied, is said to be employed "*univocally*."

If a term be used in several senses, it is, in meaning, not *one* term only, but *several*. Thus, when "Henry" (or any other such name) is applied to two individuals to denote, in each case, *that one distinct person*, it is used not as *one* term, but as *two*; and it is said to be applied to those two, "*equivocally*."

The like often occurs in respect of *Common-terms* also; that is, it often happens that one word or phrase, will be not merely *one* but *several* *Common-terms*.

Take for example the word "Case," used to signify a kind of "*covering*;" and again (in Grammar) an inflection of a noun; (as "him" is the accusative [or objective] case of "he") and again, a "*case*" such as is laid before a lawyer. This word is, in sense, three; and, in each of the three senses may be applied "*univocally*" to several things which are, in that sense, signified by it. But when applied to a *box* and to a *grammatical case*, it is used "*equivocally*."

§ 4. That process in the mind by which we are enabled to employ *Common-terms*, is what is called "*Generalization*;" *Common-terms* being often called also "*General-terms*."

When, in contemplating several objects that agree in some point, we "*abstract*" [or draw off] and consider separately, that point of agreement, disregarding everything wherein they differ, we can then designate them by a *Common-term*, applicable to them, only in respect of that which is "*common*" to them all, and which expresses nothing of the differences between them.

Thus we may contemplate in the mind several different "*kings*;" putting out of our thoughts the name and individual character, of each, and the times and places of their reigns, and considering only the *regal Office* which belongs to all and each of them. And we are thus enabled to designate any or every one of them by the "*common*" [or general] term, "*king*." And so, in the case of any other common-term.

The "*Abstraction*" which here takes place, is so called from a Latin-word originally signifying to "draw off;" because we separate, and as it were, draw off, in each of the objects before us, that point,—apart from every other—in which they are alike.

It is by doing this, that generalization is effected. But the two words have not the same meaning. For tho' we cannot "*generalize*" without "*abstracting*," we may perform *Abstraction* without *Generalization*.

§ 5. If, for instance, any one is thinking of "the Sun," without having any notion that there is more than *one* such body in the Universe, he may consider it without any reference to its *place* in the sky; whether rising, or setting, or in any other situation; (tho' it must be always actually to *some* situation) or again he may be considering its *heat* alone, without thinking of its *light*; or of its *light* alone; or of its apparent *magnitude*, without any reference either to its light or heat. Now in each of these cases there would be *Abstraction*; tho' there would be no *Generalization*, as long as he was contemplating only a *single* individual; that which we call the "Sun."

But if he came to the belief (which is that of most Astronomers) that each of the *fixed Stars* is a body affording light and heat from itself, as our Sun does, he might then, by *abstracting* this *common* circumstance, apply to all and each, of these (the Sun of our System, and the Stars) one common-term denoting that circumstance; calling them all, "*Suns*." And this would be, to "*generalize*."

In the same manner, a man might, in contemplating a single mountain, (suppose, Snowdon) make its *height* alone, independently of everything else, the subject of his thoughts; or its *total bulk*; disregarding its *shape*, and the *substances* it is composed of; or again, its shape alone; and yet while thus abstracting, he might be contemplating but the single individual. But if he abstracted the circumstance *common* to Snowdon, Etna, Lebanon, &c., and denoted it by the common-term "Mountain," he would then be said to generalize. He would then be considering each, not, as to its *actual existence as a single individual*, but as to its general character, as being of *such a description* as would apply equally to some other single objects.

§ 6. Any one of these Common-terms then serves as a "*Sign*" [or Representative] of a Class; and may be applied to,—that is, affirmed of—all, or any, of the things, it is thus taken to stand for.

And you will have perceived from the above explanations, that what is expressed by a Common-term is merely an *inadequate*,—*incomplete-notion* [or "*view*" taken] of an *individual*. For if, in thinking of some individual object, you *retain* in your mind all the circumstances (of character, time, place, &c.) which *distinguish* it (or which might distinguish it) from others,—including the circumstance of *unity*, [or singleness]—then, any name by which you might denote it, when thus viewed, would be a *Singular-term*; but if you *lay aside* and disregard all these circumstances, and abstract [consider separately] merely the points which are *common*—or which conceivably *might* be common—to it with other individuals, you may then, by taking this incomplete view [or "*apprehension*"] of it, apply to it a name expressing nothing that is *peculiar* to it; and which consequently will equally well apply to each of those others: in short, a Common-term; such as those in the above examples.

§ 7. You are to remember then, that there is not, in the case of these "*general*" [or common] Terms, (as there is in the case of *Singular-terms*) some real *thing* corresponding to each Term, existing independently of the Term, and of which that term is merely the *name*; in the same manner as "*Lebanon*" is the name of an actually-existing single individual.

At first sight indeed you might imagine that as any "*individual man*" of your acquaintance, or "*Great Britain*" or "*the Sun*" &c. has an existence in Nature quite independent of the *name* you call it by, so, in like manner, there must be some *one real thing* existing in Nature, of which the Common-term "*Man*," or the term "*Island*" is merely the *name*.

And some writers will tell you that this *thing*, which is the subject of your thoughts when you are employing a general-term, is, the "*abstract-idea*" of Man, of Island, of Mountain, &c. But you will find no one able to explain what sort of a thing any such "*abstract-idea*" can be; which is *one* thing, and yet *not an individual*, and which may exist at one and the same time in the minds of *several* different persons.

All the obscure and seemingly-profound disquisitions that you may perhaps meet with, respecting these supposed "*abstract ideas*," will but perplex and bewilder you.

Whether the writers of these disquisitions have themselves understood their own meaning, we need not here inquire. But the simple explanation that has been above given of the origin and use of Common-terms, you will be able, with moderate attention, clearly to understand. And you will find it quite sufficient for our present purpose.

§ 8. You will perceive from it that the subject of our thoughts when we are employing a Common-term, is, the *Term itself*, regarded as a "*Sign*;" namely a Sign denoting a certain *inadequate* notion formed [or, view taken] of an individual which in some point *agrees with* [or "*resembles*"] some other individuals: the notion being, as has been said, "*inadequate*," or "*incomplete*," inasmuch as it omits all *peculiarity* that *distinguishes* the one individual from the others; so that the same single "*Sign*" may stand equally well for any of them.

And when several persons are all employing and understanding the same Common-term in the same sense, and are thence said (as some Writers express it) to have "*one and the same Idea*" at once in the mind of each, this means merely that they are (thus far) all *thinking alike*: just as several persons are said to be all "*in one and the same posture*," when they have, all of them, their limbs *placed alike*; and to be of one and the same complexion, when their skins are coloured alike.

THE SPERM WHALE.

NOTWITHSTANDING its unwieldy bulk, this whale is not deficient in activity. When first pierced by the harpoon, it will tow the attached boat at the rate of more than fifteen miles an hour; but this velocity of motion is the effect of extreme excitement, and does not continue long. Under ordinary circumstances of alarm, as when conscious of being pursued by enemies, its speed averages about eight or ten miles an hour. Whale-boats propelled by both sails and oars, and a ship having the advantage of a strong breeze, will often succeed in overtaking the whales they pursue, or, by their near approach, compel them to seek refuge in the deep. When swimming rapidly, the Cachalot moves with an easy, regular, and majestic pace, the head being much raised above the surface of the sea, and a portion of the back being occasionally exhibited in the action of leaping. The individuals composing a retreating party will sometimes move in lines, like a troop of horse, and exert their peculiar leaping movements, descend, rise, and often even spout simultaneously.

A large party of cachalots gambolling on the surface of the ocean is one of the most curious and imposing spectacles a whaling voyage affords; the huge size and uncouth agility of the monsters, exhibiting a strange combination of the grand and ridiculous. On such occasions, it is not unusual to observe a whale of the largest size leap with the activity of a salmon, display the entire of his gigantic frame suspended at the height of several feet in the air, and again plunge into the sea with a helpless and tremendous fall, which causes the surrounding water to shoot up in broad and lofty columns capped with foam; whilst others of the school leap, or "*breach*," in a less degree, sportively brandish their broad and fan-shaped flukes in the air, or protrude their heads above the waves, like columns of black rock.

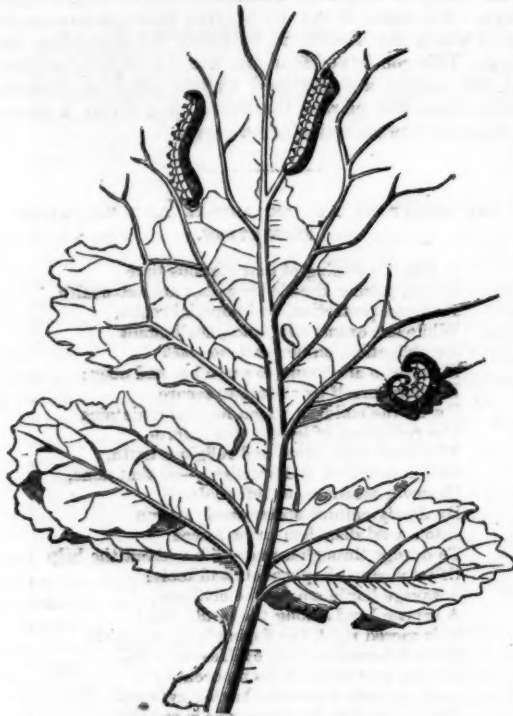
When a boat has approached a whale within a reasonable distance, the harpooner quits his oar and stands in the bow with the harpoon in his hand, until the exertions of the rest of the crew have advanced the boat sufficiently close, and in a favourable position to strike. The first harpoon is then darted, and pierces the body of the whale; the second almost instantaneously follows, with equal success, and the effects become visible at a great distance, as the wounded monster plunges convulsively, casting its flukes high in the air, and raising clouds of foam and lofty columns of water, which obscure and threaten to overwhelm the attacking party. After this first display of surprise and agony, the whale sets off with great swiftness along the surface of the water, drawing after it the attached boat; the line being secured around the logger-head, her oars speak and bristling from either side, and her bow raised high above the level of the sea and enveloped in spray; whilst the water displaced by the velocity of her motion, rises on each side of the depressed stern considerably above the level of the gunwale, threatening an inundation which she appears only to evade by her speed.

About this time, the officer in command resigns the steer-oar to the harpooner, and takes his station in the bow of the boat, where, armed with the lance, he avails himself of every opportunity to haul up close to the whale and dart his weapon into its body.

Finding flight in the horizontal direction insufficient for escape, the whale endeavours to elude his pursuers by "*soundings*," or descending perpendicularly to a great depth: but this attempt is equally ineffectual with the first, and after a short interval he re-appears on the surface, the boat again approaches, and the attack with the lance is renewed, until exhausted by loss of blood and his strenuous endeavours to escape, the animal becomes perceptibly more feeble in his movements, the sea for some distance around is crimsoned with his blood, and the spout, (also mingled with blood,) as it rises at each aspiration, is scattered conspicuously in the air, like shreds of scarlet cloth. After the slow pace of the whale, and his general air of languor, as well as the jets of dark blood cast from his spiracle, scarce higher than the crests of the waves, would lead to the idea that his efforts are at an end, he again draws the attached boat rapidly over the water, and the contest appears to be renewed; but that is merely the last struggle of the dying cachalot, or as it is termed, "*the flurry*," and hurrying about, beating the waves with his tail, the creature takes a circuitous rather than a direct course, then turns on his side, his lower jaw falls, and the "*monarch of the flood*" floats a lifeless mass, over which the waves beat with a low and confused surf.—BENNETT'S *Voyage round the Globe*.

INSECTS INJURIOUS TO THE FARMER.

III.



A TURNIP LEAF ATTACKED BY THE BLACK CATERPILLAR

HAVING, in a late article, described the insect usually called the Turnip-Fly, but which should properly be called the Turnip-Beetle, on account of its horny wing-covers; we now proceed to give a sketch of the history of the Turnip Saw-fly, better known as the Black Caterpillar. This most destructive visitant has necessarily attracted the attentive consideration of naturalists and scientific men for many years past,—for it has done a frightful amount of injury to the valuable crops on which it feeds. Fortunately, its attacks are not equally severe every season, but in dry summers it has occasionally proved a scourge to our land, which, owing to the lateness of the season at which it arrived, and the deficiency of means to check it, has been almost entirely without remedy. Though comparatively little known until a recent period, this enemy of the turnip-crop made its appearance in Norfolk in 1782, where it was noted and described by Mr. Marshall; who also speaks of a visitation from the same insect twenty years previously.

As Mr. Marshall's appears to be the first published account of the black caterpillar, it may be interesting to our readers to give a portion of it. Alluding to the former visitation he says:—

It was observed, that prior to the appearance of the caterpillars great numbers of yellow flies were seen busy among the turnip plants; and it was then suspected that the canker was the caterpillar state of the yellow fly; and since that time it has been remarked that cankers have regularly followed the appearance of these flies. From their more frequently appearing on the sea-coast, and from the vast quantities which have, I believe, been washed up by the tide, it has been a received opinion among the farmers, that they are not natives of this country, but come across the ocean; and observations this year greatly corroborate the idea. Fishermen upon the eastern coast declare that they actually saw them arrive in cloud-like flights; and from the testimony of many, it seems to be an indisputable fact, that they first made their appearance on the eastern coast; and, moreover, that on their first being observed, they lay upon and near the cliffs so thick, and so languid, that they might have been collected into heaps; lying, as it is said, in some places two

inches thick. From thence they proceeded into the country, and even at the distance of three or four miles from the coast they were seen in multitudes resembling swarms of bees. About ten days after the appearance of the flies, the young caterpillars were first observed on the under side of the leaves of the turnips, and in seven or eight days more, the entire plants, except the stronger fibres, were eaten up. A border under the hedge was regularly spared until the body of the enclosure was finished; but this done, the border was soon stripped, and the gateway, and even the roads have been seen covered with caterpillars travelling in quest of a fresh supply of turnips; for the grasses, and indeed every plant except the turnip and the charlock, they entirely neglect, and even die at their roots without attempting to feed upon them.

Mr. Marshall remarks, that in the year he wrote, about one-half of the turnips in the county had been destroyed by the voracious animal. He thinks it very probable that the flies had come over from the continent; and calculates that they might be transported from the southern cape of Norway to the coast of Norfolk in ten hours. But from whatever source they were originally derived, the simultaneous appearance of the insect in inland and maritime counties, on recent occasions, sufficiently proves that it has now become established among us as a native.

In 1818, which was a remarkably dry summer, the yellow fly appeared in great numbers, and was succeeded as usual, by the black caterpillar. This pest had been noticed more or less at irregular intervals from the time alluded to in the above quotation; but its ravages do not appear to have been of very formidable extent.

Early in July, 1835, the yellow fly was seen in great abundance upon the young turnips, and being an unusually dry summer, the caterpillars soon appeared, and met with little check in their ravages; so that it might well be called the canker year. Nearly the whole of our turnip-growing districts suffered severely. Myriads of these black caterpillars were incessantly at work, and it was a remarkable though painful sight to watch day after day their destructive operations. The ceaseless and apparently unnatural voracity of these caterpillars, and the total annihilation of the crop effected by such insignificant-looking creatures, could not but recall to mind the plagues of the ancients, the locust the canker-worm, and the palmer-worm, spoken of in the Scriptures. It must be evident to any one who has noticed the habits of this caterpillar, how much its existence and power of doing mischief depends upon a dry season. If we try to gather a turnip leaf, laden with these sleek, but unpleasant-looking creatures, the gentlest attempt to do so immediately dislodges them; indeed the hold they have of the leaf, when they are nearly full-grown, is so very slight, that not only would a heavy shower wash them off immediately, but we should imagine that a brisk wind causing any material agitation of the leaves would have a similar effect. During the year 1835, to which we now particularly allude, and in which we had daily personal experience of the ravages of these *blacks*, or *negroes*, or *niggers* as they are popularly called, the newspapers and periodicals were teeming with the subject; indeed a sort of panic prevailed throughout the agricultural world. At Elton, in Bedfordshire, twenty-four acres of English turnips were quite destroyed, with the exception of two acres that had not been hoed out; and it is on account of this exception that we name this particular instance. What is the reason that the work of destruction went on only on the hoed part of the field; and how are we to account for the fact, that when the owner, in despair at the rapid progress of the caterpillars, "stopped the man from hoeing the two acres that were left," that by so doing he quite unexpectedly saved that two acres, so that it came to a good crop?

The vast numbers of these caterpillars developed in this remarkable season, often caused them to find a scarcity of provisions, so that when they had completely

demolished all the soft parts of the leaves, and while on looking over the field scarcely a vestige of green met the eye, nothing being left but the mere skeletons of leaves, they were obliged to return to that which they at first refused, prolonging their existence for awhile by means of the nerves and fibrous portions of the plant.

The turnip crops during the year were, as we have said, subjected to great and almost universal loss; the failure being felt the most in the counties of Kent, Sussex, Essex, part of Buckinghamshire, Hampshire, and Wiltshire; and so long did the various broods continue their attacks that the produce of a second and even of a third sowing did not escape. In many districts the mischief did not cease till after the September rains. Where turnips were not wholly destroyed by the attacks of the caterpillar, they were rendered pithy, and of little comparative value. So great was the failure of the crop generally, that in some of the counties on the coast, ship-loads of turnips from the continent were contracted for to supply the deficiency.

The black caterpillars generally take the English turnips and do not touch the Swedish turnip; but several instances have been recorded of their doing much mischief also to the latter crop. While of the year 1835 Mr. Manning records that the Swedes *close by the side* of the white turnip were untouched, he also tells us that in the year 1836 he had nearly seventy acres of Swedish turnips, all of which were more or less infested with the black caterpillar, while on the English turnips not one was to be seen. In this case also it was noticed that hoeing the turnips increased the evil, for after that operation they appeared a thousand-fold more numerous. The year 1836 was happily less remarkable for the ravages of the caterpillar than the previous year had been; but Mr. Curtis observes, that he saw the flies coming out of the ground in myriads, in a ploughed field in the neighbourhood of Bristol, where potatoes had apparently been grown; and that a great many hundred acres were destroyed in Norfolk. During the following year (1837) the only notice of them made public, seems to be that near Arundel, in Sussex, where the turnip-fields were in many places completely laid waste. In 1838, Mr. Miles of King's Weston, near Bristol, writes,—

The turnip-crop went on together very well until the 8th of July, when I perceive by my farming-book that the black caterpillar first appeared. Its ravages were extended to both crops indiscriminately; as usual however with me, it attacked the field in patches, making sad havoc with the Swedes, and entirely skipping over four rows of mangold wurzel which had been placed between the Swedes and red-rings by way of experiment—to ascertain whether that plant would escape when surrounded by a crop infected by the caterpillar.

We shall close our present notice of this formidable insect with a description of its appearance in the perfect state, leaving to another occasion some particulars relating to its habits and economy with an account of all the plans we have heard or read of for saving the crops from its destructive ravages.

The saw-flies form an extensive family, which is perhaps more mischievous to plants than any other. There are different species of this family, peculiar to different plants, and in the larva or caterpillar state, they attack trees, bushes, and plants of various kinds. Some of the larger species feed upon the willow, the birch, and the white-thorn; others find their appropriate nourishment in the different members of the fir tribe; many of them luxuriate on our choicest fruit-trees; while many others industriously strip of their leaves the gooseberry, or the currant bushes. One species, very nearly allied to the saw-fly infests rose-trees.

The turnip saw-fly, in its perfect state, is of a bright orange colour, the male considerably smaller and more slender than the female. The head is black, short, and broad, with short club-shaped horns. The body is short, and somewhat cylindrical; broader, and more

depressed in the female. The wings are four in number shining, reticulated or netted in their structure, the upper pair being the longest. The insect has six rather short legs. The name of saw-fly is given from the instrument with which the female is furnished for depositing her eggs. This consists of four fine lancets, slightly serrated at the points, and enclosed by two lobes or sheaths. With these she pierces the leaves, and forms a cavity proper for the reception of the eggs.

THE RIGHT OF ALL TO MORAL AND RELIGIOUS EDUCATION.

O FOR the coming of that glorious time
When, prizing knowledge as her noblest wealth
And best protection, this imperial realm,
While she exacts allegiance, shall admit
An obligation, on her part, to *teach*
Them who are bound to serve her and obey;
Binding herself by statute to secure
For all the children whom her soil maintains
The rudiments of letters, and inform
The mind with moral and religious truth,
Both understood and practised,—so that none,
However destitute, be left to droop
By timely culture unsustained; or run
Into a wild disorder; or be forced
To drudge through a weary life without the help
Of intellectual implements and tools;
A savage horde among the civilized,
A servile band among the lordly free!
This sacred right, the liping babe proclaims
To be inherent in him, by Heaven's will,
For the protection of his innocence;
And the rude boy—who having overpast
The sinless age, by conscience is enroll'd
Yet mutinously knits his angry brow,
And lifts his wilful hand to mischief bent,
Or turns the God-like faculty of speech
To impious use—by process indirect
Declares his due, while he makes known his need
—This sacred right is fruitlessly announced,
This universal plea in vain addressed,
To eyes and ears of parents who themselves
Did, in the time of their necessity,
Urge it in vain; and, therefore, like a prayer
That from the humblest floor ascends to heaven,
It mounts to reach the state's paternal ear;
Who, if indeed she own a mother's heart,
And be not most unfeelingly devoid
Of gratitude to Providence, will grant
The unquestionable good—which, England, safe
From interference of external force,
May grant at leisure, without risk incurred,
That what in wisdom for herself she doth,
Others shall ne'er be able to undo.

—The discipline of slavery is unknown
Among us,—hence the more do we require
The discipline of virtue; order else
Cannot subsist; nor confidence, nor peace.
Thus, duties rising out of good possessed,
And prudent caution needful to avert
Impending evil, equally require
That the whole people should be taught and trained:
So shall licentiousness and black resolve
Be rooted out, and virtuous habits take
Their place; and genuine piety descend
Like an inheritance from age to age.—WORDSWORTH.

THERE is nothing in history which is so improving to the reader as those accounts which we meet with of the deaths of eminent persons, and of their behaviour in that dreadful season. I may also add, that there are no parts in history which affect and please the reader in so sensible a manner. The reason I take to be this: there is no other single circumstance in the story of any person, which can possibly be the case of every one who reads it. The general, the statesman, or the philosopher, are perhaps characters which we may never act in; but the dying man is one whom, sooner or later, we shall certainly resemble.—ADDISON.

SEASONAL WILD FLOWERS. MAY.

May is the very month of mirth!
And if there be a time on earth,
When things below in part may vie
For beauty with the things on high;
As some have thought earth's beauties given
For counterparts of those in heaven;
'Tis in that balmy vernal time,
When nature revels in her prime;
And all is fresh, and fair, and gay,
Resplendent with the smiles of May.

MAY'S British Months.

ARRIVED at the threshold of the merry month of May, we cannot help expressing our regret at the gradual disappearance of those innocent pastimes, which, in days of greater simplicity of manners, were peculiar to this season. Not often do we see the May-pole on the green, with the village population gathered round it at the close of day, while children are tripping along with the garlands it has been their day's work to collect.

These things have all, or nearly all passed away, for the pressing necessities of a redundant population leave little time or thought for pastime. But if flowers are not brought to our doors, or profusely scattered in our village festivities, we have still the same never-failing profusion inviting us abroad in the spring-tide of the year, and clothing our meadows with a robe of beauty and variety that may well excite more than a mere passing exclamation of delight.

Let us contemplate for a moment the general appearance of the vegetable world at this season with regard to one point, *i.e.*, the *variety* we see displayed in it. It is a very common remark, and one that is generally received among us, that everything in this world was created for some *use*, whether we can discover that use or not. It may indeed be true of every material or object which the Almighty has been pleased to call into existence, that some purpose of utility has been attached to or combined with it; but no one can reflect for a moment on the vast variety and the perfect elegance of the forms of vegetable life, without feeling that the beneficent purpose of the Creator has extended to beauty as well as to utility. If we merely examine the simple wild flowers of our land, and mark their boundless variety of form and colouring, the shades of difference which appear even in plants of the same species, and the more marked characteristics of different families and tribes, how can we imagine that these nice points of distinction, delightful as they are to the eye and fancy of the observer, have any special purpose affecting the well-being of the plants themselves? The botanist is quite aware that the petals of a flower are not absolutely necessary to it, and that the reproduction of the plant can be effected by the stamens and pistils alone. The splendid colours then, which are presented to us in the blossoms of summer, seem intentionally given to produce variety and beauty; the beautiful tints and freckles, and intricacies of pattern, which strike us the more as our acquaintance with flowers increases, are only further developments of the perfections of God, and of his beneficence in providing for the refreshment and delight of his creatures, as well as for the supply of all the necessities to which they are subject.

With this feeling let us mark the May flowers that are opening beneath our feet, and let the variety we observe in them, though we may sometimes feel it to be a difficulty in the way of our getting botanical knowledge, yet serve to raise our thoughts to Him whose mind has invented ten thousand forms and varieties of beauty wherever we turn our eyes, and whose perfect contrivances as it regards the smallest and most insignificant weed, may assure us of his care over those on whom He has bestowed the highest place and dignity in this lower world.

The months of May and June may be reckoned the most prolific in wild flowers, for towards the close of the

latter month the hay-harvest commences, and the pastures are shorn of myriads of blossoms, so that a comparative dearth of flowers ensues. As it would be quite impossible to name all the more important plants now in blossom, we shall direct attention to a few of our own especial favourites, leaving our readers to add to the number such additional plants as may abound in their separate localities, or may have become endeared to them by particular associations.

We begin with a modest inconspicuous plant, but one that is so fragrant, and that preserves, and even increases its fragrance so much in a dried state, that it only requires to be known, to be generally appreciated. This is the Sweet Woodruff (*Asperula odorata*), which grows wild in dry mountainous woods, and is also occasionally admitted into gardens, where its creeping roots spread and increase to a considerable extent. The leaves of this plant are bright green, lanceolate, and grow eight in a whorl round the stem. The regularity with which they form this whorl, likens them to the rowels of a spur, therefore the plant was anciently called *wood-rowel*. Small flowers of a pure white appear in May, and are fragrant chiefly at night. These flowers are very numerous, and appear in panicles, generally three together. The fruit is rough, with ascending bristles. While drying, and for a long period afterwards, the whole plant has a delightful scent, which has been compared to new-mown hay, to bitter almonds, and to heliotrope. This scent is peculiarly agreeable for perfuming clothes, &c., and it is said to be occasionally used in flavouring wine. The edges of the leaves stick to the hands and garments in a manner almost peculiar to the natural order to which it belongs, and which we shall notice presently. The sweet woodruff is eaten by cattle, sheep, and goats, and is said to increase the quantity of milk they yield. Another kind of woodruff must here be named, because it is very likely to be mistaken for the former, though it blossoms rather later. It is the Small Woodruff or Squinancy-wort (*Asperula cynanchica*). This species is perennial, whereas the sweet woodruff is an annual plant. The leaves are smooth, four in a whorl, but the upper ones are very unequal. This plant is also fragrant though in a less degree. The flowers are white or blush-coloured, growing in tufts at the end of the stalks. The unmeaning name of squinancy-wort was given because some ancient herbalist recommended the plant to be used outwardly, as well as inwardly, for the cure of the squinancy or quinsy. The botanical name *Asperula* is derived from *asper* rough, in allusion to the roughness of the leaves.

Some near relations of the Woodruff make their appearance about this time, though in backward seasons few of them vouchsafe to present a blossom until quite late in the month, or at the commencement of June. These are the different species of Bedstraw (*Galium*), which in general growth and appearance much resemble the woodruff, and belong to the same tribe, the Madder tribe. The well-known runner called *Cleavers*, or Goosegrass (*Galium aparine*), which *cleaves* with so much pertinacity to the clothes of the passer-by, affords a very familiar example, and the Cross-wort Bedstraw (*Galium cruciatum*), with its feeble branches and small yellow flowers, begins to show itself by hedges and way-sides. The circumstance which gives to *Cleavers* or *Goosegrass* the peculiarity of clinging to our garments is, that the whole surface is covered with myriads of fine hairs, which are curved into hooks and enable the plant to climb as it does, and take such fast hold on the weeds, or bushes, among which it grows. A handful of the dry stems pressed into a colander are said to answer all the purposes of a fine sieve, so effectually do all these minute hairs take up the particles from the liquid that may be poured over them. The same sort of clothing of hairs, though in a less degree, gives to the woodruff and to the different species of *Galium* their roughness of surface.

It will be observed that the leaves of all these plants grow just in the same manner as in sweet woodruff, that is, in a whorl of about four, or six, or eight, round the stem like the rowels of a spur, or the spokes of a wheel. This arrangement of the leaves will be a help to our young readers in searching for plants of the Madder tribe.

But there is another tribe which now begins to attract notice, and which contains many common and very pretty little plants. It contains the Cranesbill and the Storksbill families, and is best known as the Geranium tribe. The most attractive species in the Cranesbill family is, perhaps, that very beautiful rose-coloured flower called Herb Robert (*Geranium Robertianum*), now to be seen in blossom. The stems of this plant, as well as the leaves, are tinged with red, while the rosy petals are marked with white veins. It is a small plant growing in waste places, among bushes, stones, &c. It springs up annually, and remains in flower from May to October.

There is another species of Geranium, more showy, and indeed a very handsome plant, with large blue flowers marked with white veins, to which, perhaps, we ought to give the first place in noticing this family: This is the Meadow Cranesbill (*Geranium pratense*), but beautiful as it is, it cannot boast so rich a colouring as Herb Robert, nor does it better repay a close inspection; therefore we put our favourite first, which is also the best known of the species. The meadow cranesbill does not blossom till June, but there are of this family, besides Herb Robert, the following species now in bloom. The common Dove's-foot Cranesbill (*Geranium molle*), a soft downy plant with small rose-coloured flowers, growing very commonly both in waste, and in cultivated ground; the Jagged-leaved Cranesbill (*Geranium dissectum*), which may be known from the last by the shape of the leaves; and the Dusky, and the Shining Cranesbill, which are both uncommon. On the sandy coasts of the south of England, the Sea Storksbill may also now be seen. There will be little difficulty in recognising any member of these families if we meet with it when the seed vessels are formed, for they greatly resemble the bills of the birds whose names they bear. This structure may be observed also in our cultivated geraniums, which, though they bear very different shaped flowers, are nevertheless nearly related to the humble dwellers in our lanes and hedges. The beautiful geraniums of our green-houses are nearly all natives of the Cape of Good Hope, and if we named them according to strict botanical definitions, we should call them Pelargoniums. But the usual name answers every purpose, and serves to remind us of the connection, just alluded to, between them and the little regular cranesbill flowers that differ so much in the shape of the petals.

Several of the genera belonging to the Borage tribe now give us some of their earlier species. Among these we consider the common Comfrey (*Symphytum officinale*) by no means despicable. Indeed, it has been a favourite plant of ours from early years, partly, perhaps, because it was very difficult of attainment. This large rough-leaved plant grows very commonly in ditches, or on the margin of rivers, so that while it is well-known to most persons, it is not frequently gathered. The hairy stems are sometimes three feet high; the flowers are yellowish-white, tubular, and furnished with scales at the mouth. There is a purple variety that is, perhaps, the handsomer of the two. The roots of Comfrey are mucilaginous, and have been used for coughs; the young shoots are sometimes eaten as asparagus, but they form a very poor substitute.

Perhaps most of us that have spent the days of our youth in the country, have delighted in gathering Wild Hyacinths (*Hyacinthus non Scriptus*) from the woods and sheltered spots where they grow. These flowers now put forth their fragrant bells abundantly, and

enliven the thickets with their cheerful blue colour. They resemble too much the hyacinths of our gardens to need description here. More rarely we meet with the curious Starch Hyacinth which grows in grassy fields, or among ruins in England, but is not considered truly wild. In this plant the calyx and corolla are completely glued together. The flowers are of a darker blue than those of the wild hyacinth or blue-bell. The hyacinths belong to the Asphodel tribe noticed in our last.

Nothing can be more common than the large purple Mallow (*Malva sylvestris*). It is a way-side weed that seems to defy the dust and mire with which it is assailed, and to flourish where many a less hardy plant would immediately pine away and decay. Cottagers' children know the plant well; for the striped blossoms are succeeded by a small green fruit which they call "cheeses," and which are by no means unpleasant to the taste. The mallow has an erect branching stem, and roundish leaves, divided into about five shallow lobes. The flowers spring singly from the bosom of the leaves, and consist of five large petals, which are at first curiously twisted together, but when fully blown, spread open very widely. The stamens consist of a hollow column bearing a great number of anthers at its upper end. This column is in fact formed by the filaments growing together. The pistil has somewhat of the same conformation. But these must be examined with the aid of a botanical work in order to appreciate the general arrangement which is characteristic of the Mallow tribe. But it is the ripe fruit or cheese which presents so beautiful a structure as to cause us thus to linger over this very common plant. Dr. Lindley compares the parts when cut through with a knife to a vegetable star, and says that the kaleidoscope itself can produce nothing prettier except in colour. "Only compare a vegetable cheese," he says, "with all that is exquisite in marking, or beautiful in arrangement in the works of man, and how poor and contemptible do the latter appear! Not only, when seeing it with the naked eye, are we struck with admiration at the wondrous perfection and skill with which so obscure a point in creation is constructed; but, using our microscope, surprise is converted into amazement, when we behold fresh beauties constantly revealed as the magnifying power is increased, till at last, when the latter reaches its limit, we find ourselves still regarding a lovely prospect, the horizon of which recedes as we advance. Nor is it alone externally that this inimitable beauty is to be discovered; cut the cheese across, and every slice brings to view cells, and partitions; and seeds, and embryos, arranged with an unvarying regularity, which would be past belief, did we not know, from experience, how far beyond all that the mind can conceive, is the symmetry with which the works of nature are constructed."

Numerous interesting plants now make their appearance:—far too numerous for our notice; yet we must briefly mention a few of the prettiest. There is the common Fumitory, with tubular rose-coloured flowers tipped with black, growing in fields, and in loose soil generally; there are the different kinds of Vetch and Clover, some of them extremely beautiful; the delicate Cuckoo flower, profusely adorning our meadows, and softening the prevailing brilliancy of Marsh marigold, and buttercups; the showy Iris springing up in marshy places; the pale Honeysuckle throwing its fragrance around from copse, or hedge-row; and more conspicuous than all, more characteristic than all,—there is the Whitethorn, the Hawthorn, or May, full of buds and snowy flowers pouring out a delicious perfume, and looking upon us, as it were, with its thousand meek eyes, to invite our celebration of "the merry month of May."